Montana Fish, Wildlife & Parks

ENVIRONMENTAL ASSESSMENT DECISION NOTICE

Environmental Review of Fish Introduction into Big Casino Reservoir

Region 4
4600 Giant Springs Road
Great Falls MT 59405-0901
September 18, 2014

Proposed Action

Montana Fish, Wildlife, & Parks proposes stocking largemouth bass and crappie in Big Casino Creek Reservoir. The existing fishery in the reservoir consists of stocked rainbow trout, illegally introduced yellow perch, brook trout, and white sucker. The current fish assemblage has resulted in a poor quality recreational fishery, with desired game fish production limited by stunted yellow perch and high white sucker densities. Largemouth bass and crappie were proposed as a management tool to improve food web dynamics in the reservoir and to provide angling opportunity for the species in the Lewistown area.

Montana Environmental Policy Act

FWP is required to conduct a thorough evaluation of stocking fish not indigenous to a waterbody according to Administrative Rule of Montana (ARM) 12.7.601(4), this is done through the Montana Environmental Policy Act (MEPA). MEPA is used to assess significant potential impacts of a proposed action to the human and physical environment. In compliance with FWP's 2002 MEPA Public Involvement Policy, a draft Short Form Environmental Assessment was prepared by FWP for the proposed project and released on June 23, 2014 for public comment. The draft EA was titled: Environmental Review of Fish Introduction into Big Casino Creek Reservoir. The draft EA was circulated to local sporting groups and was also posted and remains available for viewing on the FWP webpage: http://fwp.mt.gov/news/publicNotices.

Summary of Public Comment and FWP Response

A total of 13 comments were received during the public comment period which ended on July 21, 2014. All but 3 of the comments were received via email; the others were made verbally to FWP staff. Eleven comments were supportive of the Proposed Action, one comment was made requesting further evaluation, and one comment was made without

expressing a position. Comment summaries and the department's responses are as follows:

Comment Summary 1

The existing fishery is limited by high densities of suckers and stunted yellow perch. What is the composition of the current fishery in Big Casino Creek Reservoir?

Response: Spring 2014 sampling on Big Casino Creek Reservoir indicated that white suckers and yellow perch dominate the fish assemblage, while rainbow trout make up a very small portion of the fishery (Figure 1). The white suckers are native to the drainage and are exhibiting the artificially high densities typical of small, artificial impoundments where the species exist without sufficient predation. Yellow perch sampled in 2014 were overpopulated and averaged 7 inches in length. Big Casino has been stocked with 1,500 rainbow trout annually in recent years. Rainbow trout numbers found during FWP sampling from 2008 to 2014, using gill nets or trap nets have been low, with catch-per-unit-effort values not exceeding 10 fish per net. The average rainbow trout sampled in Big Casino Reservoir in 2014 was 11.8 inches, with the largest fish measuring 14.8 inches.

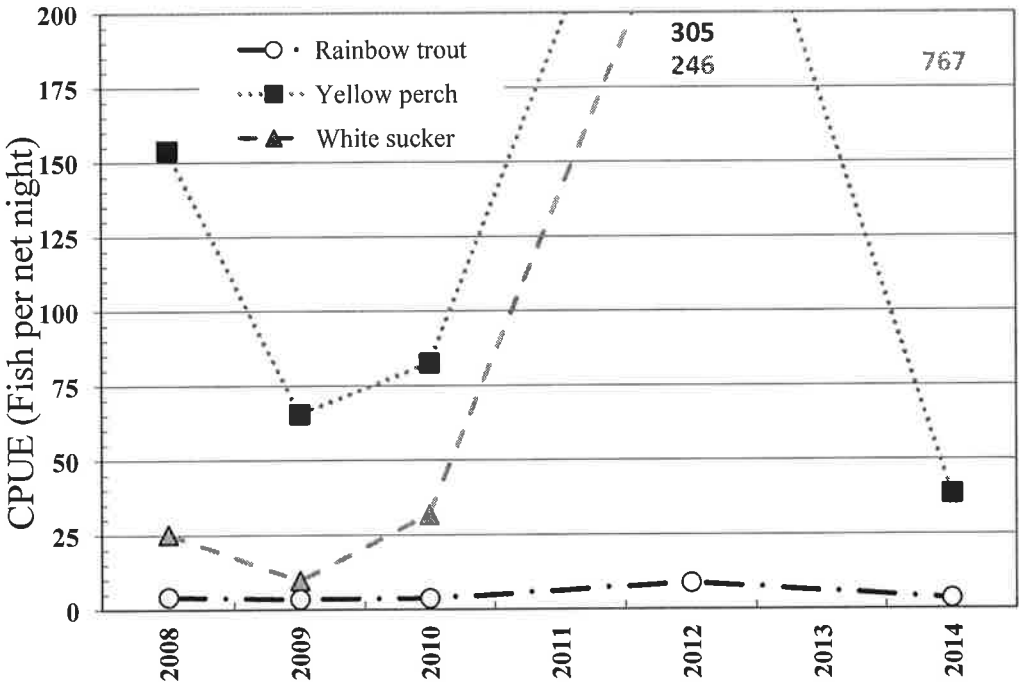

Figure1. Catch-per-unit-effort (CPUE; fish per net night) of rainbow trout, yellow perch, and white sucker in Big Casino Creek Reservoir from 2008 to 2014. Sampling from 2008 to 2010 was performed using gill nets. Trap nets were used in 2012 and 2014. Data values in 2012 and 2014 indicate the values that are beyond the y-axis scale. The black text represents the yellow perch values, grey text represents to white sucker values.

Comment Summary 2

Further explain the potential impacts of the proposed species to downstream fisheries and species of concern (SOC).

Response: To clarify the information contained in the draft EA, there are no SOC present in the Casino Creek drainage. Big Casino Reservoir is located in the Judith River drainage. Sauger and blue sucker are SOC present in the Judith River near its confluence with the Missouri River. Northern redbelly dace and northern redbelly dace x finescale dace hybrids are SOC that occur in cool, prairie streams throughout the Judith River drainage. There are populations of westslope cutthroat trout which are SOC in the headwaters of the Judith River.

Largemouth bass are present in numerous licensed private ponds and several public reservoirs in the Judith River drainage. East Fork Reservoir, which is located higher up in the drainage than Big Casino Creek Reservoir, has been stocked with largemouth bass on multiple occasions. The stocking of largemouth bass in East Fork Reservoir was conducted following an environmental assessment which concluded no ecological impacts would be expected.

There is a low risk of impact to SOC in the Judith River drainage because, although largemouth bass and crappie may live in flowing streams, they cannot reproduce or feed effectively in flowing water environments. The proposed species are lentic, meaning that they require still or slow-moving water, i.e. lakes, ponds, reservoirs, and backwaters for spawning, rearing and feeding. Should the species escape downstream from Big Casino Creek Reservoir the fish would most likely migrate downstream to suitable habitat, which is Fort Peck Reservoir. Both species are present in Fort Peck Reservoir. The combination of turbidity, flowing water, and cool water temperatures would likely prevent largemouth bass and/or crappie from persisting downstream in the Judith River drainage. The impacts to SOC while migrating would be expected to be minimal and insignificant at a population level.

Comment Summary 3

Stocking the proposed species will increase the risks of unauthorized introductions.

Response: It is important to consider the public perception of introducing non-native fish into Montana waterbodies. Unauthorized introductions in the state are numerous and costly. By performing a state-sanctioned introduction of largemouth bass and crappie, those who might perform an unauthorized introduction could be discouraged from introducing other fish (i.e. northern pike, walleye, largemouth bass, etc.) in Big Casino Creek Reservoir or other nearby waters. Additionally, the continued risk of illegal introductions could be reduced by providing increased angling diversity in

the Lewistown area. In part, one reason for introducing largemouth bass in Big Casino Creek Reservoir is to manage an illegally introduced population of yellow perch. Efforts such as the proposed action, which are evaluated for potential impacts, science based, social based, and open to public comment, can improve public opinion and angler satisfaction, thereby reducing the temptation for unauthorized fish introductions. This issue is a continual threat in Montana, regardless of the proposed action. The best way to mitigate against its occurrence is to educate the public and encourage self-governance.

Comment Summary 4

Further explain the feasibility of removal of the proposed species and the associated costs.

Response: The draft EA stated that the proposed fish species could be removed by drawing down the reservoir and removing the fish with traps. This is a feasible option and has been used in the past for sucker suppression efforts. Trapping would require cooperation with the City of Lewistown, as the reservoir is managed primarily for flood control by the city. The potential costs of drawing down the reservoir are expected to be minimal, however mechanical removal would be long term and expensive. This is a passive means of removal, requiring checks every few days. The expected costs and time commitment would be significant.

Comment Summary 5

Is the reservoir accessible to the public?

Response: Big Casino Creek Reservoir is publically accessible, maintained as a FWP Fishing Access Site.

Comment Summary 6

Will rainbow trout continue to be stocked?

Response: Should the proposed species be stocked, rainbow trout stocking would cease for 2-5 years until the largemouth bass can become established. At that point, the status of the fishery would be evaluated to determine the reservoirs potential to reinstate rainbow trout.

Comment Summary 7

The EA was brief and did not thoroughly evaluate potential impacts of the proposed action, including potential limiting factors, proposed species growth rates and likelihood of stunting, impacts existing fishery may have on proposed species growth, water chemistry and zooplankton analyses.

Response: The species proposed for stocking are common in the area. Montana FWP permits many private ponds and stocks largemouth bass and crappie in other area reservoirs. Based on the known environmental impacts stemming from the presence of these species, FWP does not feel an exhaustive environmental review is necessary to evaluate the potential impacts. There are presently 626 active private pond licenses in Region 4 which represents 26% of the private ponds licensed in Montana. The short form EA is used to evaluate the impacts of stocking fish in most of the private ponds licensed by the department. One reason largemouth bass are proposed for stocking is because they can effectively prey on perch which improves bass size and abundance. A reduction in perch numbers is the objective and would also result in increased perch size. In both cases, larger, more abundant bass and perch are desirable to most anglers.

The Short Form EA used to evaluate the proposed action is a common level of environmental review used by Montana FWP when proposing fish stocking that is not anticipated to cause substantial ecological impacts or expected to be controversial. Montana FWP also utilizes the Short Form EA for private pond permits and Stream Protection Act 124 permits. The Short Form EA provides FWP the means to adequately review routine agency actions that are not anticipated to be controversial. Conversely, in situations where a proposed action could have substantial public controversy or environmental impacts, the department prepares more detailed environmental assessments or environmental impact statements.

Potential limiting factors of the proposed stocking are that sucker biomass could limit game fish production and the water storage ratio of Big Casino Reservoir. These factors could potentially limit the success of the proposed species providing a quality recreational fishery. Should these limiting factors occur, FWP could take management actions to mitigate against them and review the management of the fishery. Status quo management is not providing a quality angling experience at Big Casino Creek Reservoir.

The growth rates of largemouth bass are provided below in the response to Comment Summary 9. We anticipate crappie growth would be as follows: 1 year – 3 inches; 2 years – 6 inches; 3 years 8 inches; 4-5 years – 10 to 12 inches (Brown 1971). Average crappies in Montana grow to 9 inches long, with the largest fish reaching 16 inches long (Holton & Johnson 2003). It is unlikely that the proposed species will experience stunting due to forage limiting the population of predatory species. Additionally, the reproductive potential of the proposed species is limited in Big Casino Creek Reservoir by limited spawning habitat, cold water temperatures, and the turnover rate of water in the reservoir. Should the proposed species show signs of stunting, management actions could be taken to reduce the population via liberalized catch limits.

The existing fishery in Big Casino is limited because of overpopulation of perch and suckers. Rainbow trout stocking would be reduced. Rainbow trout would not persist in the reservoir without stocking. Yellow perch would provide adequate forage for both largemouth bass and crappie. We believe largemouth bass and crappie will also prey upon small suckers.

We have no reason to expect significant ecological impacts from stocking largemouth bass and crappie. As such, an exhaustive data collection and analysis of plankton and water chemistry is not warranted. Other than water temperature, pH, water clarity, and conductivity data taken during annual fisheries sampling, water chemistry data does not exist for Big Casino Creek Reservoir. Zooplankton was assessed on Big Casino Creek Reservoir in 1996 and 1998, finding 0.94 and 0.91 zooplankton per Liter of water sampled. Zooplankton present included bosmina, ceriodaphnia, cyclopoid, daphnia, nauplii, and rotifera.

Comment Summary 8

Can the sucker biomass be reduced by reservoir drawdown or some other means prior to stocking?

Response: There are no current plans to reduce sucker biomass prior the proposed stocking. Efforts could be implemented to reduce sucker biomass in order to improve the recreational fishery. These efforts could include blocking sucker access to spawning habitat in the stream or mechanical suppression via trapping suckers near the inlet of the reservoir during the spawning season. Should reducing the sucker biomass be deemed necessary, any efforts would be evaluated at that time.

Comment Summary 9

Will largemouth bass grow large enough to prey upon stunted perch and provide adequate angling?

Response: Yes. Largemouth bass in Montana generally grow to quality size of 15-20 inches long. In some waters largemouth bass can exhibit slower growth rates due to the cold water temperatures and limited growing season. We anticipate that largemouth bass would be able to effectively forage on adult yellow perch within 3-5 years, at which time the bass would be 7-12 inches in length based on typical Montana growth rates. Young bass would likely prey upon perch fry immediately, which would begin the process of limiting perch numbers in the reservoir. In an area where there is an abundant, underutilized forage base, such as in Big Casino Creek Reservoir, we expect bass growth rates to be greater than in other longstanding Montana bass fisheries. Largemouth bass stocked in nearby Lower Carter Pond in the late 1990's averaged 10.5 inches and had fish up to 1.5 pounds within 3 years. Also, a largemouth bass that was

stocked in East Fork Reservoir in 2009 was recently caught by a local angler that weighed more than 4 pounds and measured about 17 inches. That particular fish had a stomach full of 3 inch perch. Every waterbody is unique, but based on past experiences in nearby reservoirs, largemouth bass would grow large enough to prey upon the yellow perch and provide a quality angling experience in Big Casino Creek Reservoir which would fulfill the objectives of the project.

Decision

Based on the Environmental Assessment, public comment, and FWP evaluation, it is my decision to proceed with the proposed action of introducing largemouth bass and crappie in Big Casino Creek Reservoir to reduce yellow perch and sucker numbers and provide opportunity for public angling for these species in the Lewistown area.

I find there to be no significant impacts to the human and physical environments associated with this project. Public comments received during the comment period showed general support for the proposed action. Therefore, I conclude that the Environmental Assessment is the appropriate level of analysis, and that an Environmental Impact Statement is not required.

Gary Bertellotti
FWP Region 4 Supervisor

References

Brown, C. J. D. 1971. Fishes of Montana. Big Sky Books, Bozeman, MT.

Holton, G. D. and H. E. Johnson. 2003. A Field Guide to Montana Fishes. 3rd Edition. Montana Fish, Wildlife, & Parks, Helena, MT.